

TECHNICAL DETAILS

METRIC

INCH

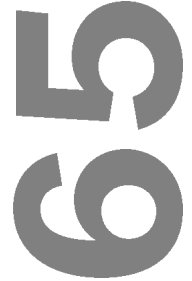


OPERATING CONDITIONS

MAXIMUM SPEED 0.5 m/sec
 TEMPERATURE RANGE -30°C + 100°C
 MAXIMUM PRESSURE 200 bar
 SURFACE ROUGHNESS
 DYNAMIC SEALING FACE $\text{Ø}D_1$ 0.1 Ö 0.4 μmRa 4 max
 STATIC SEALING FACE $\text{Ø}D_1$ $\text{Ø}D_2$ 1.6 max μmRt 10 max
 STATIC HOUSING FACES $\text{Ø}D_3$ L_1 L_2 3.2 max μmRt 16 max

1.5 ft/sec
 -22°F + 212°F
 3000 p.s.i.

μinCLA 4 Ö 16 μinRMS 5 Ö 18
 63 max 70 max
 125 max 140 max



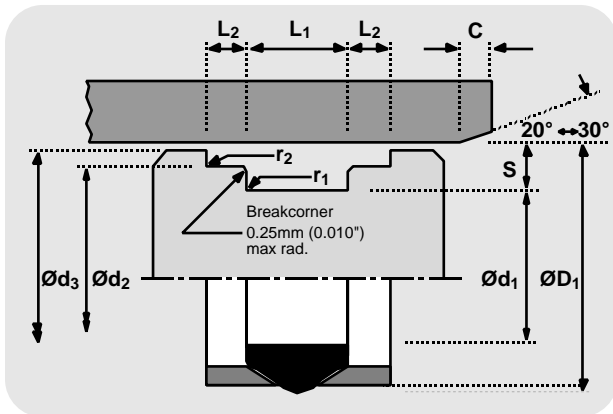
CHAMFERS & RADII

GROOVE SECTION	S mm	3.75	5.00	6.50	8.00	10.00
MIN CHAMFER	C mm	2.00	2.50	4.00	5.00	5.00
MAX FILLET RAD	r_1 mm	0.40	0.40	0.40	0.80	0.80
MAX FILLET RAD	r_2 mm	0.20	0.20	0.20	0.40	0.40
GROOVE SECTION	S in	0.156	0.187	0.250	0.312	0.375
MIN CHAMFER	C in	0.078	0.093	0.125	0.156	0.187
MAX FILLET RAD	r_1 in	0.016	0.016	0.016	0.032	0.032
MAX FILLET RAD	r_2 in	0.008	0.008	0.008	0.016	0.016

TOLERANCES

mm
in

$\text{Ø}D_1$	$\text{Ø}D_1$	$\text{Ø}D_2$	$\text{Ø}D_3$	L_1	L_2
H10	h9	h9	h11	+0.4 +0.13	0 -0.13
H10	h9	h9	h11	+0.015 +0.005	0 -0.005



DESIGN

Ideal for light to medium duty one piece piston applications, the Hallite 65 double acting seal is a simple, effective and economical design for pressures up to 200 bar/3000 p.s.i. Its compact dimensions enable the designer to keep the length of the piston to a minimum.

It is an assembly of a continuous rubber seal and two scarf cut bearings.

The nitrile rubber seal is designed to be pre-loaded by the housing to ensure an effective seal at low pressure. The outward thrust of the rubber seal on the bearings as it reacts to increasing pressure prevents any extrusion damage in the sealing area.

The polyacetal bearings are proportioned to support the piston and its side load.

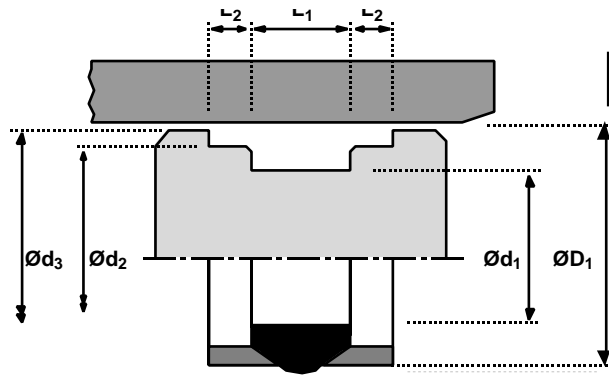
FEATURES

- COMPACT DESIGN
- EASY ASSEMBLY
- LOW WEAR
- LONG LIFE

Piston seals

65

metric

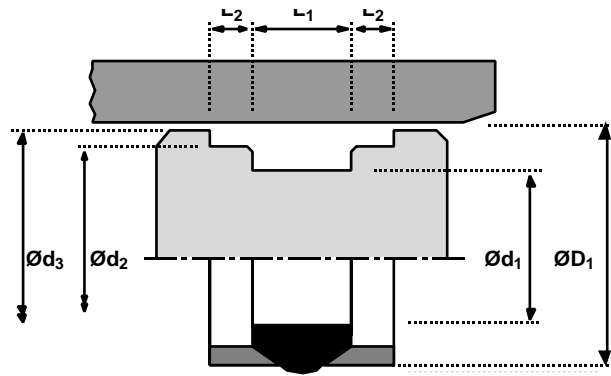


ØD ₁	TOL H10	Ød ₁	TOL h9	Ød ₂	TOL h9	Ød ₃	TOL h11	L ₁ +0.4 +0.13	L ₂ 0 -0.13	PART No.
25	+0.08 +0.00	17.5	+0.00 -0.04	21.3	+0.000 -0.052	24.0	+0.00 -0.13	8.50	3.25	2218210
32	+0.10 +0.00	22	+0.00 -0.05	27.5	+0.000 -0.052	31.0	+0.00 -0.16	11.00	4.00	2218110
40	+0.10 +0.00	30	+0.00 -0.05	35.5	+0.000 -0.062	39.0	+0.00 -0.16	11.00	4.00	2218010
50	+0.10 +0.00	40	+0.00 -0.06	45.5	+0.000 -0.062	49.0	+0.00 -0.16	11.00	4.00	2217910
63	+0.12 +0.00	53	+0.00 -0.07	58.5	+0.000 -0.074	61.5	+0.00 -0.19	11.00	4.00	2217810
80	+0.12 +0.00	70	+0.00 -0.07	75.5	+0.000 -0.074	78.5	+0.00 -0.19	11.00	4.00	2217610
92	+0.14 +0.00	82	+0.00 -0.09	87.5	+0.000 -0.087	90.5	+0.00 -0.22	11.00	4.00	2240410
100	+0.14 +0.00	87	+0.00 -0.09	93.8	+0.000 -0.087	98.5	+0.00 -0.22	14.00	6.00	0352510
125	+0.16 +0.00	112	+0.00 -0.09	118.8	+0.000 -0.087	123.5	+0.00 -0.25	14.00	6.00	0315810
140	+0.16 +0.00	124	+0.00 -0.10	132.0	+0.000 -0.100	138.5	+0.00 -0.25	17.50	8.75	0317710
160	+0.16 +0.00	140	+0.00 -0.10	151.4	+0.000 -0.100	158.5	+0.00 -0.25	25.00	12.50	0315910
180	+0.16 +0.00	160	+0.00 -0.10	171.4	+0.000 -0.100	178.5	+0.00 -0.25	25.00	12.50	0316010
200	+0.19 +0.00	180	+0.00 -0.10	191.4	+0.000 -0.115	198.5	+0.00 -0.29	25.00	12.50	0316910

Piston seals

65

inch

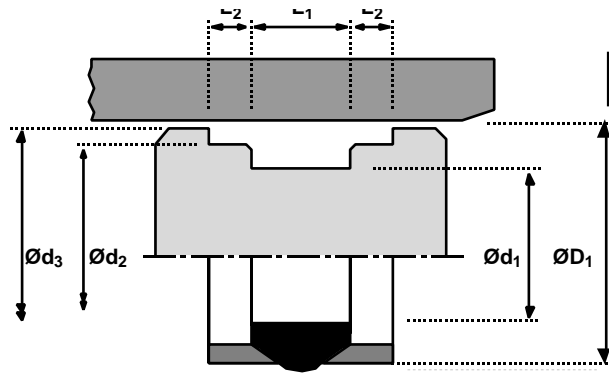


ØD ₁	TOL H10	Ød ₁	TOL h9	Ød ₂	TOL h9	Ød ₃	TOL h11	L ₁ + 0.015 + 0.005	L ₂ 0 - 0.005	PART No.
1.000	+0.003 +0.000	0.687	+0.000 -0.002	0.829	+0.000 -0.002	0.937	+0.000 -0.005	0.343	0.125	2221210
1.250	+0.004 +0.000	0.937	+0.000 -0.002	1.079	+0.000 -0.002	1.187	+0.000 -0.006	0.343	0.125	2221310
1.500	+0.004 +0.000	1.125	+0.000 -0.002	1.324	+0.000 -0.002	1.437	+0.000 -0.006	0.437	0.150	2219610
1.750	+0.004 +0.000	1.375	+0.000 -0.002	1.574	+0.000 -0.002	1.687	+0.000 -0.006	0.437	0.150	2220910
2.000	+0.005 +0.000	1.625	+0.000 -0.002	1.824	+0.000 -0.002	1.937	+0.000 -0.006	0.437	0.150	2224010
2.250	+0.005 +0.000	1.875	+0.000 -0.002	2.075	+0.000 -0.003	2.187	+0.000 -0.007	0.437	0.150	2221110
2.500	+0.005 +0.000	2.125	+0.000 -0.003	2.325	+0.000 -0.003	2.437	+0.000 -0.007	0.437	0.150	2224110
2.750	+0.005 +0.000	2.375	+0.000 -0.003	2.575	+0.000 -0.003	2.687	+0.000 -0.007	0.437	0.150	2219510
2.875	+0.005 +0.000	2.500	+0.000 -0.003	2.700	+0.000 -0.003	2.812	+0.000 -0.007	0.437	0.150	2225210
3.000	+0.005 +0.000	2.625	+0.000 -0.003	2.825	+0.000 -0.003	2.937	+0.000 -0.007	0.437	0.150	2224210
3.250	+0.006 +0.000	2.875	+0.000 -0.003	3.075	+0.000 -0.003	3.187	+0.000 -0.009	0.437	0.150	2219710
3.500	+0.006 +0.000	3.000	+0.000 -0.003	3.270	+0.000 -0.003	3.437	+0.000 -0.009	0.562	0.210	0177610
3.750	+0.006 +0.000	3.250	+0.000 -0.003	3.520	+0.000 -0.003	3.687	+0.000 -0.009	0.562	0.210	0178810
4.000	+0.006 +0.000	3.500	+0.000 -0.003	3.770	+0.000 -0.003	3.937	+0.000 -0.009	0.562	0.210	1172310
4.250	+0.006 +0.000	3.750	+0.000 -0.003	4.020	+0.000 -0.003	4.187	+0.000 -0.009	0.562	0.210	0309210
4.500	+0.006 +0.000	4.000	+0.000 -0.003	4.270	+0.000 -0.003	4.437	+0.000 -0.009	0.562	0.210	0418910
4.750	+0.006 +0.000	4.250	+0.000 -0.003	4.520	+0.000 -0.003	4.687	+0.000 -0.009	0.562	0.210	1155810
5.000	+0.006 +0.000	4.375	+0.000 -0.003	4.689	+0.000 -0.003	4.937	+0.000 -0.010	0.687	0.344	1175410
5.250	+0.006 +0.000	4.625	+0.000 -0.003	4.938	+0.000 -0.004	5.187	+0.000 -0.010	0.687	0.344	1173710
5.500	+0.006 +0.000	4.875	+0.000 -0.004	5.188	+0.000 -0.004	5.437	+0.000 -0.010	0.687	0.344	1173610
6.000	+0.006 +0.000	5.250	+0.000 -0.004	5.712	+0.000 -0.004	5.937	+0.000 -0.010	1.000	0.500	0300110
6.500	+0.006 +0.000	5.750	+0.000 -0.004	6.212	+0.000 -0.004	6.437	+0.000 -0.010	1.000	0.500	0047010
7.000	+0.006 +0.000	6.250	+0.000 -0.004	6.712	+0.000 -0.004	6.937	+0.000 -0.010	1.000	0.500	0314110

Piston seals

65

inch



ØD_1	TOL H10	Ød_1	TOL h9	Ød_2	TOL h9	Ød_3	TOL h11	L_1 + 0.015 + 0.005	L_2 0 - 0.005	PART No.
7.500	+0.007 +0.000	6.750	+0.000 -0.004	7.212	+0.000 -0.005	7.437	+0.000 -0.011	1.000	0.500	0363410
8.000	+0.007 +0.000	7.250	+0.000 -0.005	7.712	+0.000 -0.005	7.937	+0.000 -0.011	1.000	0.500	0045110
9.000	+0.007 +0.000	8.250	+0.000 -0.005	8.712	+0.000 -0.005	8.937	+0.000 -0.011	1.000	0.500	0045510